

From qrp-1@lehigh.edu Mon May 29 03:27:37 1995
Message-Id: <Pine.3.89.9505282024.A9466-01000000@netcom16>
From: Alan Kaul <kaul@netcom.com>
Subject: Re: 30M exchange
Date: Sun, 28 May 1995 23:27:37 EDT

Hi Gang, reports beginning to trickle in on type of exchange for 30M .. don't make it too complicated, etc., some said. Still waiting to hear from Chuck, who suggested compiling log data based on path distance. One person suggested adapting a lat-long program to zip codes!!! Maybe that is the solution -- what would you say to exchanging ZIP CODES?? Someone else said GRID SQUARES -- how about that? Zip codes would be 5-numbers -- and Grid Squares would be 2-letters and 2-numbers. But, of course with Grid Squares, you could figure path distance within a few miles but without external data, Grids can be calculated -- but with Zip Codes it would require an external database. A lower tech solution may also be at hand -- we're exchanging ARRL sections, could that be close enough for our purposes??

Any thoughts???

72/73 de Alan

[<Alan Kaul, W6RCL>] kaul@netcom.com

From qrp-1@lehigh.edu Sun May 28 20:34:04 1995
Message-Id: <Pine.3.89.9505281332.A23710-01000000@violet.berkeley.edu>
From: mtrail@violet.berkeley.edu
Subject: ALC/pot qrp mod
Date: Sun, 28 May 1995 16:34:04 EDT

Hi, gang

I'm trying to work up the potentiometer>>ALC jack qrp mod for my Yaesu 840, which only runs down to about 5 and half watts from the front panel. I have some very basic questions. I've seen a couple of designs, including one in Dave Ingram's How to Get Started in QRP.

Here are the questions: what kind of 100k pot should I use? Will a standard Radio Shack linear taper do the trick? There are three terminals on them; what do I do with the (unused) third terminal? Am I missing something basic here? Any other tips?

Thanks for the Elmering 101, and have a great Memorial Day weekend!

Matt KN6CR

From qrp-1@lehigh.edu Mon May 29 03:33:27 1995
Message-Id: <1995May28.233137.26920@wb3ffv.ampr.org>
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Attenuator article
Date: Sun, 28 May 1995 23:33:27 EDT

Doug, here's the article for QRPP, as I promised you at Dayton (with CC to the list)--

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Michael A. Czuhajewski WA8MCQ
7945 Citadel Drive
Severn, MD 21144

CHECKING HAMFEST ATTENUATORS ON THE RUN

In the April 1993 Idea Exchange column in the QRP Quarterly I told how to check attenuators on the run at a hamfest, using just an ohmmeter, to make sure they're reasonably good before you buy them. The January 1995 issue had my article on checking their exact attenuation at home with a power supply and digital multimeter. Should we use valuable space in the Quarterly for esoteric topics like these? After Dayton this year, I think I have 7 true believers who'll agree those topics aren't completely out in left field!

In the flea market I found a surplus dealer with over two dozen Texscan model RA-50 rotary step attenuators for sale, at a very attractive \$10 each. The company is now known as Trilithic but still makes this model--50 ohms, 0 to 10 dB in 1 dB steps, 1 watt average power, rated to 2 GHz--and I knew there would probably be other QRPers interested in them. Step attenuators are useful in building and experimenting, and even in QRP operating ("the final here is a 6 dB attenuator!"). I bought several, with the promise that I could bring back any bad ones for replacement if I could test them before he left Dayton.

I borrowed a digital meter from one of the Yanks at the GQRP booth, and checked them out. Unfortunately I didn't have my list of resistance values, but having several made it easy to make up a list on the fly from values seen on one unit and see if they all agreed.

If they did, it would prove that none had any open resistors inside; it wouldn't tell me how close the attenuation steps were to their nominal values, but at least I could be sure they weren't burned out. (The power supply test at home will show exactly how many dB's there are.)

I ended up buying 9 attenuators, finding 2 bad ones and getting them replaced, and sold 7 of them to fellow "Dayton QRPers" at my cost. Along with a good price on an attenuator, they got something you don't usually get at a hamfest--testing by an independent third party (me) to insure they were good. After I got home I sold the remaining two at cost. And why didn't I keep any for myself at this bargain price? I already had 8 commercially made step attenuators and two homebrew ones! (I'm an attenuator fanatic.)

Step attenuators are really pretty simple--nothing more than a few resistors in a T or PI arrangement--and by looking at them from different ways with an ohmmeter you can figure out if they are OK inside. Figure 1 shows a basic attenuator section; the values given are for 3 dB. Not much to it--just three resistors. We only need to do 3 quick tests to see if things are good. (Note--if this was a T configuration, the resistor values would be different but you would still see the same thing looking into it with an ohmmeter. Anyone who has ever studied electronics in college probably has dim memories of delta/Y transformations in the first year.)

First, check from 1 to 2, between the center pins of the connectors. You'll see the value of R2 in parallel with R1 and R3 (which are in series with each other via ground).

Next, check from 1 to 3, or from one center pin to ground. Now you'll see R1 in parallel with R2 and R3. Finally, check 2 to 3, from the other connector. You should read about the same value as 1 to 3. Table 1 shows the approximate values to expect. (These are based on the attenuator resistor values in the ARRL Electronics Data Book.)

*****[start of table]*****

Resistance values looking into 50 ohm attenuators
(with nothing connected to either connector)

Attenuation (decibels)	Either end to ground (1-3, 2-3)	Between both ends 1-2)
1	436 ohms	6 ohms
2	221	11

3	150	17
4	116	22
5	96	28
6	83	33
7	75	38
8	69	43
9	64	48
10	61	51
20	51	82
30	50	94
40	50	98
50 and above	50	99 or 100
0 dB	Infinity	0 ohms (short)

*****[end of table]*****

Repeat these steps for each section of the attenuator. If it has switches for each section, test them individually, one at a time; if it's a rotary attenuator, step through the entire range. If you see any values which are substantially different from these, the attenuator may have a problem.

Some attenuators, like the RA-50, have a special position labelled "Zo". This breaks the connection between both connectors, and terminates each one with the characteristic impedance of the unit--50 ohms, in this case. (See Figure 2.) You should see 50 ohms from 1 to 3 and 2 to 3, and 100 ohms between 1 and 2 (resistors in series via ground). A couple of the units I sold at Dayton had one of these terminating resistors burned out. I think I warned both the people who got them, but I didn't consider it worth returning them to the dealer since you'd rarely use that function, and the units he had left were rather grungy.

The latest Trilithic catalog gives the specs for their attenuators at various frequencies. As frequency increases, the tolerance loosens up. For instance, the RA-50 is rated at +/- 0.1 dB at 30 MHz, 0.2 dB at 500 MHz, 0.25 dB at 1.0 GHz, and 0.5 dB at 2 GHz. I set one for 10 dB and checked it on a network analyzer, and it fell within the specified tolerance up to 1 GHz. Above that, it turned into a bit of a roller coaster ride with an downward trend, ending up at 9 dB at 2 GHz. That's been my experience with many older attenuators

I've tested, that they don't always meet the specs on the higher end but are still quite usable for most ham use through at least 440 MHz. And you can still use them anywhere in their frequency range if you calibrate them first, by checking the various positions at the frequency of interest and making up a chart.

If you see a bargain attenuator at a hamfest at a good price, reach into your bag for your digital multimeter, or borrow one, and do this quick test to see if it's really the bargain it appears to be. It could save you a lot of grief later (and kept me from wasting \$20 at Dayton). And the best part--the dealer let me keep one of the bad ones after he replaced it and I was able to fix it at home, netting me a free attenuator to add to my collection!

--qrp--

R2 17.6

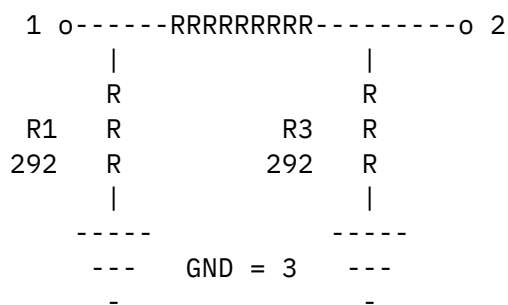


Figure 1

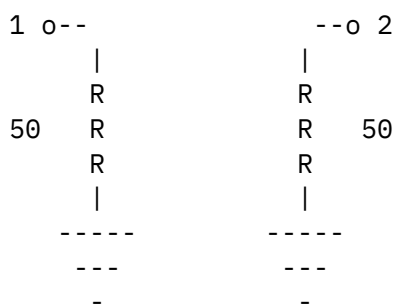


Figure 2

--qrp--

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Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
 E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org
 The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
 Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From qrp-1@lehigh.edu Sun May 28 15:31:23 1995
 Message-Id: <950528112946_14831700@aol.com>
 From: EJlim@aol.com
 Subject: Help w/ OHR WM-1 meter
 Date: Sun, 28 May 1995 11:31:23 EDT

Does anyone have experience troubleshooting the OHR WM-1?

I have just completed my OHR watt-meter, and aligned as instructed. However, the meter has a problem.

With no signal, the meter reads 1/4 scale at the 10w position, about 1/2 scale in the 1w position and over full scale in the 100mw position. This is with no signal attached. The rig was aligned with the correct voltages. Some voltage is getting through someplace.

Any one have a thought.....I meanother than staying away from soldering irons..hihi. Thanks

Jim - KG0PP (Peanut Power)

From qrp-1@lehigh.edu Sun May 28 17:00:07 1995
Message-Id: <Pine.SUN.3.91.950528105642.24209F@ume>
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>
Subject: hootowl sprint tonite: listen for ve6!
Date: Sun, 28 May 1995 13:00:07 EDT

Almost killed myself putting up my inverted vee again yesterday.
One leg came down in the snow storm (yes, snow storm!) last week.
Yesterday and today are sunny and in the high 70's BTW.

Will be on 20 to start, then forty. will wait to see what propogation gods do before I decide power output!

BTW.....antenna is "optomized for north/south on 30m for upcoming propogation tests. Apex 60feet. Ends at 40 feet. Length: 1.2 wavelength fed with ladder line.

Dr. Rick Zabrodski BSc, MD, CCFP(E)	*	VE6GK
Email: zabrodsk@med.ucalgary.ca	*	NorCal 519 ARCI 7650 GQRP 8329
Phone 403-271-5123 Fax 403-225-1276	*	"Power is no substitute for skill"

From qrp-1@lehigh.edu Mon May 29 00:40:51 1995
Message-Id: <199505290039.UAA105844@nss1.CC.Lehigh.EDU>
From: scalawag@ids.net
Subject: Re: Impending 30 mtr exchange
Date: Sun, 28 May 1995 20:40:51 EDT

Gang,
My 2 cents worth:

Fully half of my 559 reports on qrp the last 3 or 4 years ended up busted QSOs pretty early...And only about half my reports are that good! (DX or not.)

Sooo am not sure how we can or should handle the miles per watt info but don't think the exchange should be very complicated. Lat./Long. exchanges can be pretty tough under expected condx. I understand that the idea is quality QSOs as well as distance, but unless the rest of you have a lot better luck than I, this is one station that is Very happy to get anything more than report/qth/name in a QRP QSO.

This is just a voice....will be happy to give any exchange the college try.

73/72 Lee W5TEH I'll try to keep Rhode Island well
represented on the 30mtr prop study.

SCALAWAG@IDS.NET

From qrp-1@lehigh.edu Mon May 29 02:41:08 1995
Message-Id: <199505290238.TAA15660@neptune.neptune.net>
From: "Jeffrey D. Stai" <jds@neptune.net>
Subject: Re: Impending 30 mtr exchange
Date: Sun, 28 May 1995 22:41:08 EDT

If you must have location data, maybe a grid square is good enough.
It's only four little characters... not extremely accurate, but
(as the old joke goes) it's close enough!

jeff stai
de ke6knf qth dm14
jds@neptune.net

From qrp-1@lehigh.edu Mon May 29 01:00:07 1995
Message-Id: <199505290059.AA16887@cardamom.unx.sas.com>
From: "Warren E. Lewis" <saswel@unx.sas.com>
Subject: Re: Impending 30M exchange--urgent

Date: Sun, 28 May 1995 21:00:07 EDT

Gang,

Hummm...I sort of thought we just wanted to have some friendly conversations on 30M between QRP-L members and anyone else that we find on the 30M band during the middle of the summer. And then report our results to Chuck.

Lets just get on and have a normal chat...lets not corrupt a fun experience with a bunch of rules and a set exchange.

Speaking of contests: did anybody else work the CQ WPX test this weekend? I only made 120 Qs. Anybody else have any reports?

cheers - Warren

--

Warren E. Lewis
Technical Support Division
SAS Institute Inc.
Cary, NC

saswel@unx.sas.com
(919) 677-8001 x6542
PP-ASEL
AD4ZE DOD#0021

From qrp-l@lehigh.edu Sun May 28 18:45:27 1995
Message-Id: <Pine.3.89.9505281138.A15408-0100000@netcom22>
From: Alan Kaul <kaul@netcom.com>
Subject: Impending 30M exchange--urgent!
Date: Sun, 28 May 1995 14:45:27 EDT

Hi Gang ... if you're planning on working the 30M Propagation Study, we got to settle on some information to be exchanged during QSO's. You might have noticed Chuck's log proposal, which would include Distance between stations, so he could calculate miles per watt. That means, we have to provide information for the receiving station to calculate the path distance, bearing, etc.

Therefore, I would propose for purposes of our discussion here, an 'exchange format' that would include, signal report, lat-long, ARRL section:

i.e. sample: K1ABC de W6RCL, 599 LAT 34.2N LON 118.2W ARRL - LA

Don't mean to be a bear about this, but time is running out---June 1 is coming soon, to a calendar near you!

PS -- If you don't have a computer program to calculate distances based on LAT-LONG info, the aol ham radio club has one written by N1STB which he is giving away. Unfortunately, there is no disclaimer allowing it to be distributed --- otherwise, I'd be happy to upload to lehigh.edu. Anyone knowing of a 'free' lat-long program to calculate distances between two points that might be available for FTP --- please pass it along. If we're going to try and have some 'scientific' value from this Propagation Study, then it seems to me the distances between points and the points and the relative bearings is essential information EVEN if we have to wait for some future person to process the data.

Any thoughts????

72/73 de Alan

PPS -- the WPX last night on 40! 2-hours, 25 QSO's. About 18 mults from various USA prefixes ((each however providing ZERO QSO points)). Then I worked Canada, Alaska, Brazil and 5-6 Japanese stations! Could also hear CX1, ZL2, VK4, but couldn't work them with the Norcal 40 -- but I tried anyway!!

[<Alan Kaul, W6RCL>] kaul@netcom.com

From qrp-1@lehigh.edu Sun May 28 18:10:55 1995
Message-Id: <199505281810.0AA00263@cadman.cit.buffalo.edu>
From: Erik Werner <werner@cadman.cit.buffalo.edu>
Subject: Inductor values
Date: Sun, 28 May 1995 14:10:55 EDT

Greetings. I just spend this weekend trying to build the pixie 2 transceiver for the 80m band. I have two questions.

1) How exact must the values for the capacitors be. ie. I put in a .047 mfd cap in lieu of a .05mfd.

2) I got an assortment of inductors from RS. I haven't been able to figure out their values from the ARRL handbook. Is there a circuit I can build or a table somewhere out there? Currently all I get is static through the headphones. I'd like to test to see if the tx part of the circuit works but without a licence I'm afraid that this will have to wait. :)

Erik

From qrp-l@lehigh.edu Sun May 28 18:33:41 1995
Message-Id: <1995May28.143219.29368@wb3ffv.ampr.org>
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re Mike Bryce on QRP-L
Date: Sun, 28 May 1995 14:33:41 EDT

Someone recently said that Mike Bryce, WB8VGE, is on QRP-L. I haven't checked the list lately, but rather doubt that he is. About a month ago he told me he wasn't on Internet any more, and don't think he was ever on the list at all. However, you can still contact him by e-mail at his Compuserve home:

73357.222@compuserve.com

(Mike is the operator of Sunlight Energy Systems, which was mentioned on the list recently, as well as the Publicity Officer and Membership Chairman of the QRP ARCI. If anyone has trouble with their subscription to the QRP Quarterly, he's the one to contact.) 73 and Queue Our Pea
DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From qrp-l@lehigh.edu Sun May 28 19:41:02 1995
Message-Id: <199505281940.MAA00666@mailhost.primenet.com>
From: aa7qy@primenet.com (Roger Hightower)
Subject: SunLight Energy Systems
Date: Sun, 28 May 1995 15:41:02 EDT

Thanks to all for the info you sent. To summarize, Mike Bryce, WB8VGE is the owner. He works a day job, so it's best to leave a message on his voice mail at 216 649 1802, or you can try 216 832 3114 in the morning until 2 pm est.

The unit in Robert Capon's QST article is the mrp-4, good for up to 4 amps of solar array, and it sells for \$37, shipping is \$3.00 anywhere in the U.S.

Mike is not on the qrp-l list, but his e-mail address is
73357.222@compuserve.com.

Mike has responded to my queries, and I am ordering the unit. Tnx agn.

73, de Roger AA7QY
aa7qy@primenet.com rhigh@aztec.asu.edu Ham Radio: AA7QY@KC7Y.AZ.USA.NA

From qrp-l@lehigh.edu Mon May 29 01:15:14 1995
Message-Id: <Pine.SUN.3.91.950528191644.27829B-100000@ume>
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>
Subject: Re: SunLight Energy Systems
Date: Sun, 28 May 1995 21:15:14 EDT

I have the solar charger in question.....well built, well enclosed and works well!

Dr. Rick Zabrodski BSc, MD, CCFP(E) * VE6GK
Email: zabrodsk@med.ucalgary.ca * NorCal 519 ARCI 7650 GQRP 8329
Phone 403-271-5123 Fax 403-225-1276 * "Power is no substitute for skill"

On Sun, 28 May 1995, Roger Hightower wrote:

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>
> Mike has responded to my queries, and I am ordering the unit. Tnx agn.

>
>
> 73, de Roger AA7QY
> aa7qy@primenet.com rhigh@aztec.asu.edu Ham Radio: AA7QY@KC7Y.AZ.USA.NA

>
>
>

From qrp-1@lehigh.edu Sun May 28 18:33:50 1995
Message-Id: <1995May28.142426-0400@[130.113.234.7]>
From: Glen Leinweber <leinwebe@mcmail.CIS.McMaster.CA>
Subject: Unbalanced feedline
Date: Sun, 28 May 1995 14:33:50 EDT

Need some help gang,

Just blew up my good stereo with my NORCAL 40. Amazing that a few watts going thru a supposedly balanced feedline could feed enough power into the speaker leads to blast both audio power amps. Here's the setup:

Norcal feeding a T-type low-pass (ungrounded) tuner, a current balun, 300 ohm transmitting type feedline to a centre-fed antenna. The antenna has about 48 ft. one side, and 52 ft. on the other.

Can't get my brain around this one: does an unbalanced antenna guarantee that the feedline will be unbalanced too? (There's no balun at the feedpoint). With 300 ohm twinlead, do I have to worry about maintaining balance at both ends? (baluns at antenna feedpoint as well as at the tuner) This sounds like too much stuff between rig and antenna. I'm already QRP. Simpler perhaps to lop off four feet from the longer element to give equal lengths.

Now I don't fancy using my good stereo as the guinea pig to detect a radiating feedline. Anyone have a good way to tell if the feedline has equal currents thru both wires?

Got my 30M transmitter just about done. 10.140 MHz CB Xtal in a VXO: 10.099 to 10.143 Mhz., 1-2 watts. Putting it in a box now.
Glen Leinweber VE3DNL leinwebe@mcmail.mcmaster.ca